Corrector Prototype Beamline Testing

Planning and Status May 11, 2007 at 1:00 pm
Craig Drennan

Introduction:
We are planning to do a pre-shutdown installation of a new corrector package into the booster. This would test not only the corrector package but all of the other associated power supplies and controls. By putting the corrector package into the path of the beam we will be able to get an early indication of how this new system will impact the beam. Below are the minutes of our second meeting. We expect to meet each Friday at 1:00 in the Penthouse.

Those in attendance:
Bill Pellico, Kent Triplett, Joel Misek, Craig Drennan

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0. The prototype tests are expected to be run during study cycles starting the first week in July.

1. We have determined that the prototype corrector could be installed near the beam whacker in period 4, just upstream of the existing long straight corrector.

In the meeting today Joel showed photos of the Long 4 area where the Corrector prototype could be installed and explained his plan for moving things about.

2. The magnet power cables would be run from a rack in the West Tower (G04-RR0-8), and through penetration L5-7.

3. We have the power cable in stock (in warehouse) and can see about bring over a set of spools to be run during a shutdown in June.

4. I preparation for running the cables the penetration will be tested to be sure that it is clear, and a rope can be run from rack to corrector to measure the length of cable to be pulled.

5. Once this cable is pulled it will stay in place for use in the final installation.

6. The next step for the racks is to get AC power. A power outage will be required in order to make the final connection of the 480 VAC power.

It was pointed out that additional cable tray will need to be added to the run between the racks and the penetration. Also that Bob Mau is slated to present Power Outage Plans at the May 18th Shutdown planning meeting.

7. We are expecting to have the following available for the start of testing the first week of July

a) A potted/tested corrector package with a BPM

b) A stand with the prototype adjustment plate assembly.

c) One set of magnet power cables connecting the corrector to the power supplies in the West Tower.

d) Cable connecting the Klixon temperature sensor to interlocks in the bulk supply.

e) Components needed for the cooling water connections. Maurice Ball needs to be aware that the water connection for this prototype test is 6-8 feet further than for the final installation.

f) Full set of switch mode power supplies.

g) Final version of the bulk power supply.

e) CAMAC crate with six C473 ramp controllers and a C218 Bulk Supply status and control card.

f) HRM analog readback chassis and VME crate and boards that receive the HRM measurement data and transmit the data to the ACNET database.

g) Applications for setting up and controlling the correctors.

h) All internal rack cable assemblies for status and control connections.

8. A number of shutdowns between now and July will be needed to prepare for the prototype testing.

a) During one of the (or the) power outage(s) we will want to connect the 480 VAC for the racks. Also at this time we may be able to test the penetration and run the rope measurement for the future cable run.

b) We will need a shutdown to run the magnet power cables.

c) We will need a final shutdown to install the corrector with its stands and connections. We will want to survey the magnet to evaluate the fixtures, and we will want to do a power test while we still have access to the tunnel.